

## CLAIMS

1. An armature coil for a rotary electric machinery such as electric generators and motors including a plurality of identical coil blocks each formed by a plurality of turns  
5 of an elongated conductor so as to correspond to different phases, characterized by that:  
each of said coil blocks includes two groups of axial sections which are diametrically opposed to each other and curved sections joining said two groups to each other at each axial end, the axial sections of one of said groups being disposed in an inner cylindrical layer while the axial sections of the other of said groups are disposed  
10 in an outer cylindrical layer which is coaxial with said inner cylindrical layer; and  
said coil blocks are combined with each other by circumferentially shifting one coil block from another in such a manner that said axial sections are arranged circumferentially along said inner and outer cylindrical layers one next to another.
- 15 2. An armature coil according to claim 1, wherein the axial sections disposed in said inner cylindrical layer are greater in number than those disposed in said outer cylindrical layer by one.
3. An armature coil according to claim 1, wherein said curved sections include a  
20 first curved sections connected to an axial end of each of said axial sections of said one group, a second curved section connected to a same axial end of a corresponding one of said axial sections of said other group, and an axial offset section joining the other ends of said first and second curved sections to each other so as to provide an axial offset and reverse a layer order of said curved sections in relation to the corresponding curved  
25 sections of adjacent turns.

4. An armature coil according to claim 1, wherein each of said coil blocks is formed by a Litz wire conductor which is molded into a prescribed cross sectional shape.

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5. An armature coil according to claim 4, further comprising a substantially cylindrically shaped insulator assembly for retaining said conductors in place.

6. An armature coil according to claim 5, wherein said insulator assembly defines  
10 a plurality of axially extending gaps in cooperation with said conductor for conducting cooling fluid therethrough.

7. An armature coil according to claim 1, wherein a plurality of axially extending gaps are defined between adjacent axial sections of said conductors for conducting  
15 cooling fluid therethrough.